

### **REMARKS**

This amendment is being filed in response to the Office Action mailed November 14, 2008. In that Office Action, claims 20-42 were rejected as not being directed to statutory subject matter. Also, claims 20-32 were rejected on prior art grounds and claims 33-42 were rejected on Section 112 grounds. No amendments have been made. Accordingly, claims 20-42 remain pending in the application.

#### **Specification Amendment**

The specification is being amended to correct an obvious error and to obtain substantial correspondence between the specification and drawings. In particular, the word "continuous" is being corrected to -- discontinuous -- in the fifth sentence of the last paragraph on Page 12 of the specification, and this is being done to conform that sentence to the drawings and to the remainder of the description. As explained on Page 12 of the specification and elsewhere, and as is clearly and unambiguously shown in Fig. 4, the altered protocol transmission signal  $S_{out}(t)$  is a discontinuous modulated data signal which results from the introduction of periods of silence into the input signal  $S_{in}(t)$ . As stated in MPEP § 2163, citing *In re Oda*, 443 F.2d 1200, 170 USPQ 268 (CCPA 1971), "[a]n amendment to correct an obvious error does not constitute new matter where one skilled in the art would not only recognize the existence of the error in the specification, but also recognize the appropriate correction." Such is the exact situation here. One skilled in the art clearly understands from the application that by inserting periods of silence into the continuous modulated signal  $S_{in}(t)$  of Fig. 3, a discontinuous modulated signal  $S_{out}(t)$  is created, and so would recognize not only that the reference on Page 12 to  $S_{out}(t)$  being "continuous" is an error, but also that "discontinuous" is the appropriate correction. Accordingly, no new matter is being entered.

#### **§101 Rejections**

Claims 20-42 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The rejection is respectfully traversed. The recent case of *In re Bilski*, 545 F.3d 943 (CAFC 2008) specifies that, to meet the requirements of statutory subject matter under § 101, a claim must meet the "machine or transformation" test wherein the claim must either be

tied to a particular machine or must transform an article to a different state or thing. The Office Action asserts that the claims do not meet either prong of this test, but does not provide any supporting analysis or rationale. In fact, each of the independent claims satisfy this test.

Each of the independent claims specify the transmission of a generated periodic data signal over a voice channel of a wireless communication system, an example of which is shown in Fig. 1. As is widely known to those skilled in the art, communication via a voice channel of a wireless communication system requires particular electronic hardware that transmits the communication from a radiating element (e.g., an antenna) according to a particular communication protocol such that it can be received and the communication extracted based on that protocol. It is not necessary that the individual components (e.g., an antenna) of such a system be recited in the claims, as they are an inherent physical component of the claimed wireless communication system. Thus, the process in each of these claims is tied to particular hardware. Moreover, as to claim 20, it more particularly specifies that the transmission is through a vocoder which again, one of ordinary skill in the art knows is necessarily implemented by a hardware device that applies a codec or other signal processing to the communication being sent.

Accordingly, withdrawal of the rejection under § 101 is requested.

### **§112 Rejections**

Claims 33-42 stand rejected under 35 U.S.C. § 112, first paragraph, as not being supported by a written description of their subject matter. The rejection is respectfully traversed because the application does clearly convey to one skilled in the art that, at the time of the filing of the original application, Applicants had possession of the subject matter being recited in claims 33 and 34. The offending language from claim 33 is "the periods of silence comprise frame gaps during which no frequency shift keying modulation occurs." For claim 34, the language of concern is the recitation of "a data signal that includes modulated data and periods of silence during which the data signal is unmodulated." In both cases, the specification provides ample support and description of these limitations. As stated in MPEP § 2163, "[w]hile there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure." In the specification at Pages 11-

12, it explains (1) that the periods of silence are referred to in the specification as frame gaps, (2) that the input periodic data signal  $S_{in}(t)$  can be an FSK modulated data sequence, and (3) the control device 210 passes the (modulated) data signal during some time periods (e.g.,  $t_0-t_1$ ) and passes a period of silence during other time periods (e.g.,  $t_1-t_2$ ) to thereby produce the altered signal  $S_{out}(t)$  of Fig. 4. Thus, one skilled in the art clearly understands that the altered signal  $S_{out}(t)$  contains periods of silence (or frame gaps) during which the FSK modulation does not occur (claim 33), and similarly, that the signal  $S_{out}(t)$  includes modulated data and periods of silence during which the data signal is unmodulated (claim 34). While this is not stated word-for-word the same as is used in the claim, one skilled in the art clearly understands it, and it is clearly and unambiguously shown in the drawings.

Accordingly, withdrawal of the rejection under § 112 is requested.

#### **Prior Art Rejections**

Claims 20-25, 29, 30, and 32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Preston. Claims 26-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Preston in view of Gardner, and claim 31 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Preston alone. Claims 33-42 have not been rejected on prior art. These rejections are respectfully traversed for the reasons discussed below.

This prior art rejection is unchanged from the previous Office Action, and Applicants respectfully submit that the prior discussions concerning Preston submitted by Applicants fully address the deficiencies in these rejections. Thus, those arguments are repeated here and are annotated with additional comments responsive to the Examiner's analysis beginning on Page 2 of the outstanding Office Action.

The rejection of each of the claims 20-32 is predicated on the Examiner's interpretation from Preston that the sacrificial bits contained in the IBS packet 70 constitute "periods of silence" as recited in independent claims 20 and 29. Applicants respectfully submit that this interpretation is incorrect and wholly without support in the prior art or in the record. Preston clearly shows that these sacrificial bits are 1's and 0's that are converted to tones using frequencies  $f_1$  and  $f_2$ . And, as is clearly known to those skilled in the art, and as is easily

ascertainable by dictionary lookup, a tone is not silence, but a sound, which is the opposite of silence. To interpret the phrase "periods of silence" as reading on tones generated using a sequence of sacrificial (i.e., non-data bearing) bits, is to interpret that phrase as covering completely the opposite of what it clearly and unambiguously means. This is not reasonable.

Furthermore, the fact that the sacrificial bits contain no useful data does not make them "periods of silence." They are still modulated using the frequencies f1 and f2 and thus still produce tones, and this is explicitly disclosed by Preston which then goes on to state that (since they are sacrificial) they can be subsequently scaled or filtered (e.g., attenuated or eliminated) without effecting the digital data being transmitted. The Office Action asserts that Applicants have argued that Preston's sacrificial bit "tones" are not "silent" periods. This is not what Applicants stated, but rather, Applicants argued in their last response that Preston's sacrificial bit "tones" are not "periods of silence" as recited in the claims. That argument as well as the remaining remarks in Applicants' last response are still deemed fully applicable and have not been properly rebutted. For example, the statement in the most recent Office Action that Preston's "tones" of the sacrificial bits are nonetheless 'silent' because they communicate no representative data" is not the proper inquiry because (1) the claim specifies "periods of silence", which tones are not and (2) the Examiner's statement focuses on the content carried by the signal (i.e., the meaning or meaninglessness of the data being carried by the tones), rather than on whether the signal includes "periods of silence."

To sum up, Applicants submit that, as shown in Fig. 5 of Preston, the sacrificial bits are 1's and 0's that are modulated using the two different frequencies shown in Fig. 6, and therefore do not constitute "periods of silence" within a data signal. Nor does Preston anywhere suggest generating such a signal. Accordingly, Applicants respectfully request withdrawal of the rejections on the basis of Preston. With respect to the rejection of claims 26-28, as stated in Applicants' last response, Gardner has been cited only for its applicability to the additional limitations added in these dependent claims. However, Gardner does not make up for the above-noted deficiencies of Preston. That is, there is nothing from Gardner that teaches or suggests generating a modulated periodic data signal having periods of silence. Accordingly, claims 26-28 also patentably define over these references.

In the most recent Office Action, the Examiner asserts that Applicants' specification is "wholly indefinite" with reference to what constitutes "periods of silence." In support of this, the Examiner notes that Fig. 4 depicts both periods of data and periods of silence, but then concludes that it is not clear what "constitutes the periods of silence" because of the statement on Page 12 that the output data signal is a "continuously" modulated signal. Applicants appreciate that this statement has caused some confusion for the Examiner; however, this singular, obvious error in the specification does not eliminate what is otherwise a clear teaching to those skilled in the art. As discussed above in connection with the correction of this error, one skilled in the art will understand that the word "continuous" was in error and that "discontinuous" was meant instead. With this error corrected, there is no possibility of indefiniteness with respect to the claimed "periods of silence". Rather, as indicated in Fig. 4, the periods of silence can be implemented by reducing the signal to zero, and those skilled in the art may know or develop other suitable ways of supplying the periods of silence.

Accordingly, as properly understood, the claimed periods of silence do not read on Preston's frequency modulated sacrificial bits, nor are they obvious in view of Preston.

### Conclusion

In view of the foregoing, Applicants respectfully submit that all claims are allowable over the prior art. Reconsideration is therefore requested. The Examiner is invited to telephone the undersigned if doing so would advance prosecution of this case.

The Commissioner is hereby authorized to charge Deposit Account No. 07-0960 for any required fees, or credit any overpayment associated with this communication.

Respectfully submitted,

REISING ETHINGTON P.C.

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